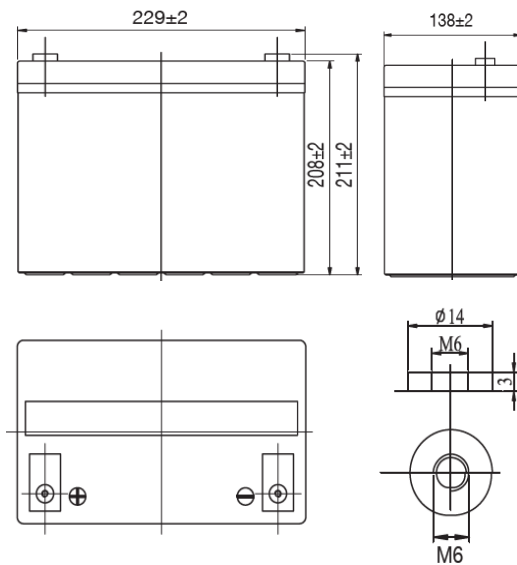


#### APPLICATIONS

- Uninterruptible Power Supplies (UPS)
- Electric Power Systems (EPS)
- Emergency backup power supplies
- Electronic apparatus and equipment
- Communication power supplies
- DC power supplies
- Auto control system



#### SPECIFICATIONS

|                                              |                      |                              |
|----------------------------------------------|----------------------|------------------------------|
| Nominal Voltage                              |                      | 12 V                         |
| Number of cells                              |                      | 6                            |
| Design Floating Life (20°C)                  |                      | 10 years                     |
| Dimensions                                   | Length               | 229 mm                       |
|                                              | Width                | 138 mm                       |
|                                              | Height               | 208 mm                       |
|                                              | Total Height         | 211 mm                       |
| Weight                                       |                      | 15.3 kg                      |
| Nominal Capacity (25°C)                      | 20 hours rate (1.80) | 57.80 Ah                     |
|                                              | 10 hours rate (1.80) | 55.00 Ah                     |
|                                              | 5 hours rate (1.75)  | 48.15 Ah                     |
|                                              | 1 hour rate (1.60)   | 34.10 Ah                     |
| Internal Resistance<br>(fully charged, 25°C) |                      | 7.50 mOhm                    |
| Self Discharge                               |                      | approx. 3% per month at 25°C |
| Nominal Operating Temperature                |                      | 25°C                         |
| Operating Temperature range                  | Discharge            | -15°C to 50°C                |
|                                              | Charge               | -10°C to 50°C                |
|                                              | Storage              | -20°C to 50°C                |
| Float Charging Voltage                       |                      | 2.25 to 2.30 V/cell at 25°C  |
| Temperature compensation                     |                      | -18mV/°C                     |
| Boost Charging Voltage                       |                      | 2.40 to 2.45 V/cell at 25°C  |
| Temperature compensation                     |                      | -30mV/°C                     |
| Maximum charging current                     |                      | 16.5 A                       |
| Maximum discharge current (25°C)             |                      | 550 A (5 sec.)               |
| Short Circuit Current (25°C)                 |                      | 1460 A                       |

#### Battery Construction

| Component    | Positive Plate | Negative Plate | Container & Cover | Safety Valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-------------------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | ABS               | Rubber       | Copper   | Fiberglass | Sulfuric acid |

#### PERFORMANCE DATA

##### Discharge Constant Current at 25°C (Amperes)

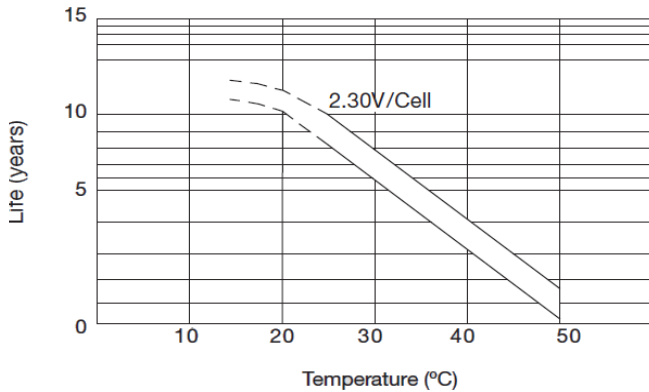
| End Voltage (V/cell) | 10min | 15min | 30min | 1h   | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------------------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.60V                | 116   | 90.8  | 55.0  | 34.1 | 20.1 | 14.0 | 11.5 | 9.82 | 6.73 | 5.60 | 2.94 |
| 1.65V                | 112   | 88.6  | 53.9  | 33.6 | 20.0 | 13.9 | 11.4 | 9.76 | 6.69 | 5.59 | 2.93 |
| 1.70V                | 107   | 85.3  | 52.3  | 32.7 | 19.8 | 13.8 | 11.4 | 9.69 | 6.65 | 5.57 | 2.93 |
| 1.75V                | 103   | 82.4  | 51.0  | 32.1 | 19.5 | 13.8 | 11.3 | 9.63 | 6.60 | 5.54 | 2.91 |
| 1.80V                | 97.0  | 78.0  | 49.1  | 31.1 | 19.0 | 13.3 | 10.9 | 9.34 | 6.40 | 5.50 | 2.89 |

##### Discharge Constant Power at 25°C (Watts)

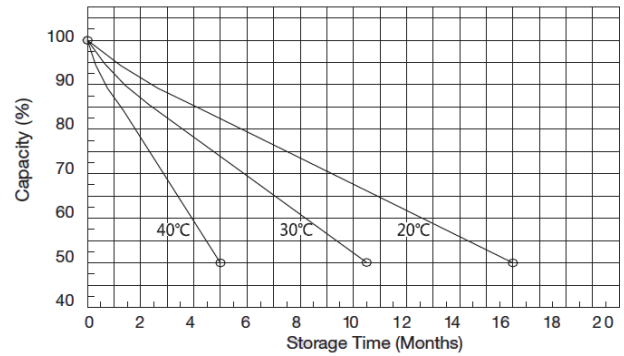
| End Voltage (V/cell) | 10min | 15min | 30min | 1h  | 2h  | 3h  | 4h  | 5h  | 8h   | 10h  | 20h  |
|----------------------|-------|-------|-------|-----|-----|-----|-----|-----|------|------|------|
| 1.60V                | 1247  | 996   | 617   | 389 | 233 | 165 | 135 | 116 | 80.0 | 66.9 | 35.3 |
| 1.65V                | 1210  | 973   | 605   | 383 | 231 | 164 | 134 | 115 | 79.5 | 66.7 | 35.2 |
| 1.70V                | 1160  | 937   | 586   | 373 | 229 | 163 | 134 | 115 | 79.0 | 66.5 | 35.1 |
| 1.75V                | 1110  | 905   | 572   | 366 | 226 | 162 | 133 | 114 | 78.4 | 66.1 | 34.9 |
| 1.80V                | 1048  | 857   | 551   | 355 | 220 | 157 | 129 | 110 | 76.1 | 65.7 | 34.7 |

Note: The above characteristics data can be obtained within three charge/discharge cycles.

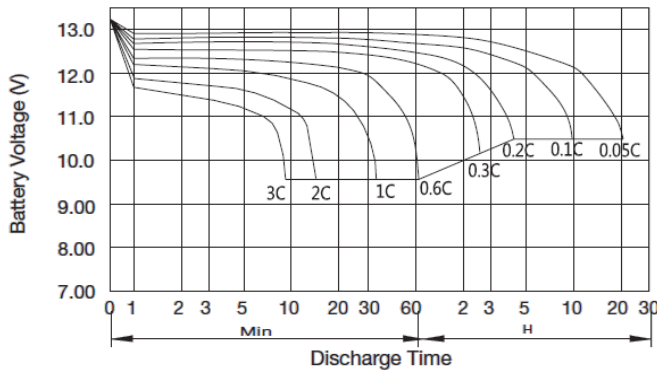
Temperature Effects on Float Life



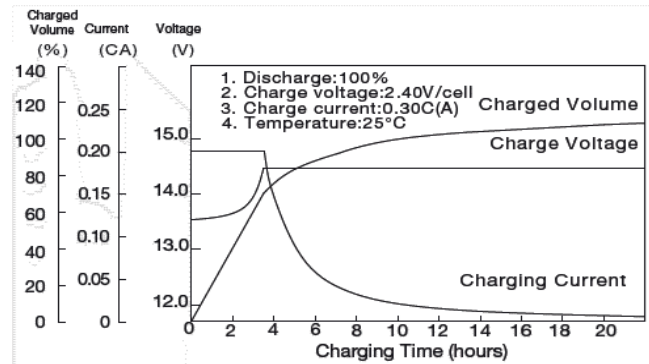
Self Discharge Characteristics



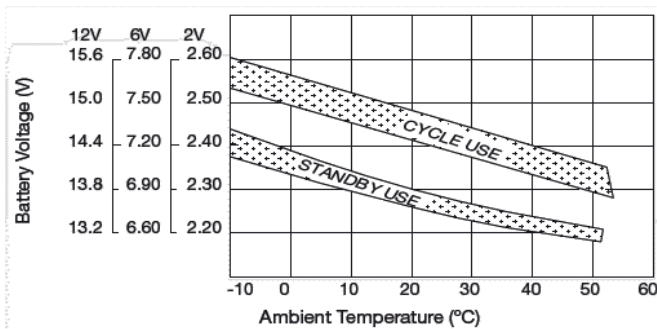
Discharge Characteristics (25°C)



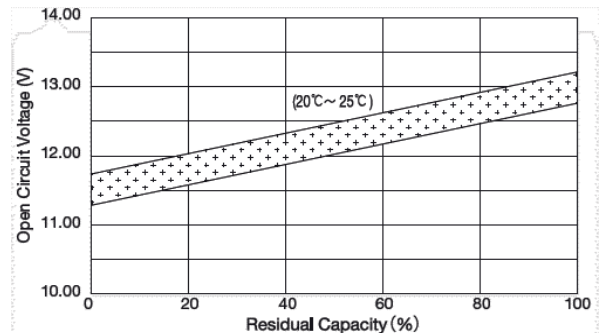
Charging Characteristics (25°C)



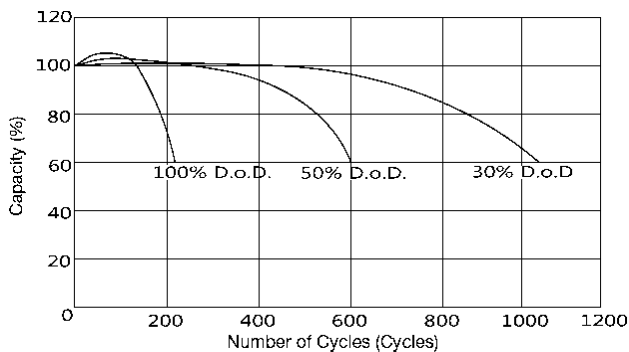
Relationship Between Charging Voltage and Temperature



Relationship Between OCV and Residual Capacity (25°C)



Cycle Service Life in Relation to Depth of Discharge



Temperature effects on capacity

